

Dear Commissioners and staff:

My wife and I operate what we believe to be the first and longest running wireless broadband Internet provider, LARIAT.NET, which has been in continuous operation since 1993. In our many years of operation in Laramie, Wyoming, we've had much experience with the problems of spectrum overcrowding and noise on the unlicensed (Part 15) bands, and were elated when we heard of the allocation of the first wireless spectrum exclusively reserved for the provision of outdoor wireless broadband service. While the width of the band that was allocated -- only 50 MHz -- is only about double that of the 900 MHz band, the fact that it would not be polluted by noise from cordless phones, etc. and would require at least some spectrum etiquette made us very optimistic. We would already be operating on that band were approved equipment available for it.

We are concerned that the present petition for reconsideration was motivated by corporations' selfish interests and is not in the public interest. Motorola, for example, derives most of its revenues from licensed communications, and its equipment which is designed for unlicensed bands -- Canopy -- is designed to monopolize rather than share the bands it occupies. (While current rules prohibit frequency hopping transmitters from coordinating their hopping frequencies so as to monopolize the band, Canopy takes a different but equally egregious approach, using multiple non-hopping transmitters transmitting simultaneously across an entire band to completely blot out the band. In our opinion, this abuse of the spectrum commons should also be prohibited by regulation.)

In its petition for reconsideration, Motorola "requests that the spectrum be licensed in two 25 MHz blocks with license areas based on recent population information to accurately reflect market size." This is precisely the approach which -- in recent auctions -- has placed virtually all licensed spectrum out of reach for wireless broadband providers. To my knowledge, there has never been a spectrum auction in which a WISP could purchase suitable spectrum for the delivery of wireless broadband in just the cities or counties that it serves. The market areas have always been so large, and the bids necessary to win so high, that WISPs (whose prices are limited by cable and telephone companies selling broadband below cost so as to promote their other services) were economically foreclosed from participation. The current auction process has also allowed companies such as Echostar -- via "shell" companies such as Alta Wireless and SOUTH.COM -- to buy up spectrum upon which they then "sit" for the sole purpose of foreclosing competition. A large percentage of the spectrum recently purchased at auction -- for example, LMDS spectrum -- now sits fallow and unused, especially in areas such as ours. But we cannot gain access to it at any reasonable price, nor can we secure equipment for it at prices that consumers would be willing to pay. (Because the spectrum is not uniformly available to WISPs throughout the country, it isn't feasible for any manufacturer to produce such equipment in volume.) Absent well considered reform of the auction process, it will not be of use to wireless broadband providers seeking spectrum.

Intel et al are correct when they write, "when WISPs in congested areas attempt to use unlicensed, or nonexclusively licensed, bands - where there can be dozens or even hundreds of simultaneous users - 'tragedy of the commons,' or significant interference, issues tend to emerge often rendering the network virtually useless."

They are wrong, however, about the remedy.

The remedy for this problem is not to remove from play the first spectrum that has the potential not to be plagued by it. The answer is not to eliminate the commons, but rather to mandate fair, efficient, and courteous use of it. This is why limiting the use of the band to outdoor wireless broadband (so that consumer devices will not knowingly or unknowingly interfere), and requiring a spectrum etiquette (which should be fleshed out and standardized), are key. The best future we see for this band -- and one that we fervently hope will come to pass -- is that it will ultimately be governed by a spectrum etiquette that allows WISPs to coexist gracefully without even having to be aware of one another's presence. We are, in essence, at a stage analogous to the early days of the automobile: We recognize the need for "rules of the road," but have yet to develop ones that work.

We may (and already do) see some laziness on the part of equipment manufacturers, who seem not to want to engage in technological innovation but rather to sell "tweaked" versions of the equipment they already have on hand. But we should not indulge that laziness. Rather, we should hold out this 50 MHz of spectrum -- and the market for equipment for it -- as an incentive for them to innovate and to develop such etiquettes. As was shown at Lawrence Lessig's conference at Stanford a year and a half ago (which several members of the FCC staff attended), equipment manufacturers -- especially those such as Motorola, whose technologies were all developed with the assumption that spectrum would be exclusively licensed -- tend to gloss over the problem of sharing spectrum, and/or to propose "solutions" which are really not solutions at all. The best thing the FCC can do -- and the thing it is in the unique position to do -- is stick to its principles and foster technological innovation. How? By offering the market for equipment that uses this spectrum as a reward to those who address and really solve the problem of efficient, effective spectrum sharing. We sincerely hope that the FCC will stick to its guns and refine its regulations not by converting this band into licensed spectrum but rather by refining the rules to require a widely implemented and well standardized etiquette that allows its best use.

Sincerely,

Brett Glass and Isobel Nichols

Founders, owners, and operators

LARIAT.NET